REMARKS

As a preliminary, Applicant and Applicant's representative thank the Examiner for the interview which was held on September 19, 2008.

In the Office Action, claims 1-2, 4, 7-8, 12-13, 15, and 19-21 are rejected under 35 U.S.C. 103(a) as obvious over US 6,901,747 to Tashiro et al. ("Tashiro") in view of US 6,491,016 to Buratti ("Buratti").

Further, in the Office Action, claims 5, 9-11, 14, 16-18 and 22 are rejected under 35 U.S.C. 103(a) as obvious over Tashiro in view of Buratti and further in view of US 6,082,325 to Digeser et al. ("Digeser").

Reconsideration and withdrawal of the rejection is respectfully requested. As discussed at the interview, Buratti discloses certain modes of operation with PILOT and PRE injections, but these modes are very different from the "rich-mixture regeneration operating mode" in which the feature "at least two pilot injections triggered in a crankshaft angle range from approximately 50° to approximately 5° ahead of the top dead centre point of the cylinder concerned" is used in the presently claimed invention.

In particular, Figure 1 and col. 6, lines 5-10 of Buratti, to which reference is made in the Office Action, do not disclose the PILOT and PRE modes of operation. Specifically, Figure 1 of Buratti shows a system diagram of the general architecture of the system of Buratti. Further, the passage at col. 6, lines 5-10 discloses

> a second injection strategy when the exhaust gas is below catalysis temperature (i.e. at temperatures at which no reduction in nitric

> oxides is made by DeNox catalyst 12), and which provides for performing preinjection PRE to reduce noise, and main injection MAIN1 and postinjection AFTER to reduce the amount of particulate matter produced.

Thus, the mode of operation at col. 6, lines 5-10 only has a PRE injection.

It is noted that Buratti uses both PILOT and PRE in its first strategy for startup, its fifth strategy for break-away or warm-up, and its sixth strategy for high-torque, low-engine-speed (see Buratti at col. 6, lines 1-4, 24-28, and 29-32). However, these strategies correspond to situations where full combustion of the fuel mixture is sought, i.e., these strategies correspond to requirements very different from an NOx trap regeneration mode.

Further, the fourth injection strategy of Buratti is for reducing nitric oxides NOx and seems to correspond to a rich mode stage for regeneration of the NOx trap. This fourth strategy of Buratti uses only one preinjection PRE "to reduce noise" and two main injections MAIN1 and MAIN2 "to reduce nitric oxides NOX, and one postinjection AFTER "to reduce particulate matter (Buratti at col. 6, lines 19-23).

In summary, none of the strategies used in Buratti provides any guidance as to whether using PILOT and PRE injections would provide any advantage in a rich mode intended to regenerate the NOx trap, in particular when reducers are desired at the exhaust to assist in the NOx trap regeneration.

In contrast, in the presently claimed invention, the rich-mixture regeneration operating mode provides that at least two pilot injections can be triggered in a crankshaft angle range from

approximately 50° to approximately 5° ahead of the top dead centre point of the cylinder concerned, and a main injection can be triggered in an undercalibrated range up to a crankshaft angle of approximately 35° after the top dead centre point, as recited in present claims 1 and 20.

An advantage of the presently claimed invention is that it is possible to improve the regeneration of a NOx trap, where an incomplete combustion can be rather advantageous, and incomplete combustion can be promoted by a degraded ignitionability of the main injection. The features and advantages of the presently claimed invention are not taught or suggested in any of Tashiro, Buratti or Digeser. Therefore, the presently claimed invention is not obvious over the cited references taken alone or in any combination.

In addition, with respect to the dependent claims, it is submitted that the combined features of these respective claims are not taught or suggested in Tashiro, and that Buratti and Digeser fails to remedy these deficiencies. Therefore, each of the dependent claims is not obvious over the cited references taken alone or in any combination.

In view of the above, it is submitted that the rejections should be withdrawn.

In conclusion, the invention as presently claimed is patentable. It is believed that the claims are in allowable condition and a notice to that effect is earnestly requested.

In the event there is, in the Examiner's opinion, any outstanding issue and such issue may be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of the response period. Please charge the fee for such extension and any other fees which may be required to our Deposit Account No. 502759.

Respectfully submitted,

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